WE CLAIM AS OUR INVENTION

1   1) A method of distributing information packets
2 containing headers over a communication network, from
3 multiple send endpoint ports, in a send endpoint unit,
4 through a standard based send firewall adapter, across at
5 least one firewall, through a standard based receive
6 firewall adapter, to multiple receive endpoint ports in a
7 receive endpoint unit, comprising the steps of:
8   determining a single firewall port through the at
9 least one firewall, from a plurality of firewall ports
10 into the network;
11   opening a network tunnel connection over the
12 communication network, along determined firewall port,
13 which connection traverses the at least one firewall;
14   multiplexing multiple streams of packets in the
15 multiple send endpoint ports of the send endpoint unit,
16 into the single determined firewall port, to form a
17 single stream of multiplexed packets;
18   sending the multiplexed packets over communication
19 network through the opened tunnel connection, from the
20 send firewall adapter to the receive firewall adapter;
21 and
22   demultiplexing the single determined firewall port
23 into the multiple receive endpoint ports of the receive
24 endpoint unit to form multiple streams of demultiplexed
25 packets.

1   2) The method of Claim 1, further comprising before
2 the sending step the additional step of providing a
3 header protocol from a stack of protocols in response to
4 the packet headers.

1   3) The method of Claim 2, further comprising the
2 additional step of altering the protocol stack by adding
3 or deleting specific protocols.

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1   4) The method of Claim 1, wherein the at least one
2 firewall is
3   a single firewall between the communication network
4 and either the send firewall adapter or the receive
5 firewall adapter.

1   5) The method of Claim 1, wherein the at least one
2 firewall is at least two firewalls,
3   a send firewall between the communication network
4 and the send firewall adapter and
5   a receive firewall between the communication network
6 and the receive firewall adapter.

1   6) The method of Claim 1, wherein the communication
2 network has a network protocol for distributing
3 information packets.

1   7) The method of Claim 6, wherein the network
2 protocol is TCP.

1   8) The method of Claim 7, wherein the communication
2 is carried by voice and/or video.

1   9) The method of Claim 6, wherein the communication
2 network is an internet.

1   10) The method of Claim 6, wherein the communication
2 network is a wide area network.

1   11) The method of Claim 6, wherein the communication
2 network is a local area network.

1   12) The method of Claim 1, wherein the determined
2 firewall port is selected by the send firewall adapter.

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1   13) The method of Claim 1, wherein the determined
2 firewall port is selected from a range of firewall ports.

1   14) The method of Claim 1, wherein the determined
2 firewall port is predetermined.

1   15) The method of Claim 14, wherein the
2 predetermined firewall port is a default port.

1   16) The method of Claim 15, wherein the
2 predetermined default firewall port is the HTTP network
3 port.

1   17) The method of Claim 1, further comprising before
2 the sending step the additional step of opening multiple
3 logical communication channels within the opened tunnel
4 connection by assigning channel numbers in the header of
5 the packets, the multiple channels corresponding to the
6 multiple send endpoint ports.

1   18) The method of Claim 17, further comprising after
2 the sending step the additional step of opening multiple
3 receive endpoint ports within the receive endpoint unit
4 by assigning port numbers in the header of the packets,
5 the multiple receive endpoint ports corresponding with
6 the multiple logical communication channels.

1   19) Apparatus for distributing information packets
2 containing headers over a communication network, from
3 multiple send endpoint ports, in a send endpoint unit,
4 through a standard based send firewall adapter, across at
5 least one firewall, through a standard based receive
6 firewall adapter, to multiple receive endpoint ports in a
7 receive endpoint unit, comprising:
8
9   means for determining a single firewall port through
10 the at least one firewall, from a plurality of firewall
11 ports into the network;
12
13   means for opening a network tunnel connection over
14 the communication network, along determined firewall
15 port, which connection traverses the at least one
16 firewall;
17
18   means for multiplexing multiple streams of packets
19 in the multiple send endpoint ports of the send endpoint
20 unit, into the single determined firewall port, to form a
21 single stream of multiplexed packets;
22
23   means for sending the multiplexed packets over
24 communication network through the opened tunnel
25 connection, from the send firewall adapter to the receive
26 firewall adapter; and
27
28   means for demultiplexing the single determined
29 firewall port into the multiple receive endpoint ports of
30 the receive endpoint unit to form multiple streams of
31 demultiplexed packets.

1   20) A computer readable media for storing computer
2 instructions which cause a computer to distribute
3 information packets containing headers over a
4 communication network, from multiple send endpoint ports,
5 in a send endpoint unit, through a standard based send
6 firewall adapter, across at least one firewall, through a
7 standard based receive firewall adapter, to multiple
8 receive endpoint ports in a receive endpoint unit, by
9 executing the steps of;
10
11   determining a single firewall port through the at
12 least one firewall, from a plurality of firewall ports
13 into the network;
14
15   opening a network tunnel connection over the
16 communication network, along determined firewall port,
17 which connection traverses the at least one firewall;
18
19   multiplexing multiple streams of packets in the
20 multiple send endpoint ports of the send endpoint unit,
21 into the single determined firewall port, to form a
22 single stream of multiplexed packets;
23
24   sending the multiplexed packets over communication
25 network through the opened tunnel connection, from the
26 send firewall adapter to the receive firewall adapter;
27 and
28
29   demultiplexing the single determined firewall port
30 into the multiple receive endpoint ports of the receive
31 endpoint unit to form multiple streams of demultiplexed
32 packets.